

FLOOD DAMAGE PREVENTION ORDINANCE

OF THE

COUNTY OF CHOWAN, NORTH CAROLINA

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COASTAL ZONE
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FLOOD DAMAGE PREVENTION ORDINANCE

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COUNTY OF CHOWAN
FLOOD DAMAGE PREVENTION ORDINANCE

ARTICLE 1. STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES

SECTION A. STATUTORY AUTHORIZATION

The Legislature of the State of North Carolina has in Article 6, Chapter 153-A-121, and in Article 21, Chapter 143-215.51, delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry by regulation of artificial obstructions in a floodway. Therefore, the Board of Commissioners of the County of Chowan, North Carolina, ordain as follows:

SECTION B. FINDINGS OF FACT

1. The flood hazard areas of Chowan County are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
2. These flood losses are caused by the cumulative effect of obstructions in flood plains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood-proofed, or otherwise unprotected from flood damages.

SECTION C. STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

1. restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
2. require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
3. control the alteration of natural flood plains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
4. control filling, grading, dredging and other development which may increase erosion or flood damage; and,
5. prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

SECTION D. OBJECTIVES

The objectives of this ordinance are:

1. to protect human life and health;
2. to minimize expenditure of public money for costly flood control projects;
3. to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

4. to minimize prolonged business interruptions;
5. to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in flood plains;
6. to help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize future flood blight areas; and
7. to insure that potential home buyers are notified that property is in a flood area.

ARTICLE 2. DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

"Appeal" means a request for a review of the Building Inspector's interpretation of any provision of this ordinance or a request for a variance.

"Area of Shallow Flooding" means a designated AO or VO Zone on the County's Flood Insurance Rate Maps (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

"Area of Special Flood Hazard" is the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year.

"Base Flood" means the flood having a one percent chance of being equaled or exceeded in any given year.

"Basement" means that portion of a building between floor and ceiling, which may be partly below and partly above grade.

"Building" means any structure built for support, shelter, or enclosure for any occupancy or storage.

"Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

"Existing Mobile Home Park or Mobile Home Subdivision" means a parcel (or contiguous parcels) of land divided into two or more mobile home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile home is to be affixed (including at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed before the effective date of this ordinance.

"Expansion to an Existing Mobile Home Park or Mobile Home Subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the mobile homes are to be affixed (including the installation of utilities, either final site grading or pouring of concrete pads, or the construction of streets). Any expansion is considered "new construction."

"Flood" or Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. the overflow of inland or tidal waters;
2. the unusual and rapid accumulation of runoff of surface water from any source.

"Flood Hazard Boundary Map (FHBM)" means an official map of the County, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as Zone A.

"Flood Insurance Rate Map (FIRM)" means the official map of the County on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones applicable to the County.

"Flood Insurance Study" is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary-Floodway Map and the water surface elevation of the base flood.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

"Floor" means the top surface of an enclosed area in a building (including basement), i.e. - top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

"Highest Adjacent Grade" means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

"Mean Sea Level" means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the flood plain. For purposes of this ordinance, the term is synonymous with National Geodetic Vertical Datum (NGVD).

"Mobile Home" means any structure which consists of a single unit completely assembled at the factory and is designed so that the total structure (not including double wides or triple wides) can be transported on its own chassis; and is over 32 feet in length and 8 feet in width; and is designed to be used as a dwelling and provides complete, independent living facilities inclusive of permanent provisions for living, sleeping, eating, cooking and sanitation. Such units shall be considered a mobile home; regardless of the shape of the unit; whether or not the wheels have been removed, set on jacks, skirting, masonry blocks or other temporary or permanent facilities.

"National Geodetic Vertical Datum (NGVD)" as corrected in 1929, is a vertical control used as a reference for establishing varying elevations within the flood plain.

"New Construction" means structures for which the "start of construction" commenced on or after the effective date of this ordinance.

"New Mobile Home Park or Mobile Home Subdivision" means a parcel or contiguous parcels of land divided into two or more mobile home lots for rent or sale for which the construction of facilities for servicing the lot on which the mobile home is to be affixed (including, at a minimum, the installation of utilities, either final site grading or the pouring of concrete pads, and the construction of streets) is completed on or after the effective date of this ordinance.

"Start of Construction" means the first placement of permanent construction of a structure (other than a mobile home) on a site, such as the pouring of slabs or footings or any work beyond the stage of excavation, including the relocation of a structure. Permanent construction does not include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not a part of the main structure. For a structure (other than a mobile home) without a basement or poured footings, the "start of construction" includes the first permanent framing or assembly of the structure or any part thereof on its piling or foundation. For mobile homes not within mobile home parks or mobile home subdivisions, "start of construction" is the date on which the construction of facilities for servicing the site on which the mobile home is to be affixed (including, at a minimum, the construction of streets, either final site grading or the pouring of concrete pads and installation of utilities) is completed.

"Structure" means a walled and roofed building that is principally above ground, a mobile home, a gas or liquid storage tank, or other man-made facilities or infrastructures.

"Substantial Improvement" means, any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure, either (1) before the improvement or repair is started, or (2) if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either (1) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

"Variance" is a grant of relief to a person from the requirements of this ordinance which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship.

ARTICLE 3. GENERAL PROVISIONS

SECTION A. LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all areas of special flood hazard within the jurisdiction of the County of Chowan.

SECTION B. BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD
HAZARD

The areas of special flood hazard identified by the Federal Emergency Management Agency in its Flood Insurance Study for Chowan County, dated April 6, 1984, with accompanying maps and other supporting data, and any revision thereto are adopted by reference and declared to be a part of this ordinance.

SECTION C. ESTABLISHMENT OF DEVELOPMENT PERMIT

A Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities.

SECTION D. COMPLIANCE

No structure or land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of this ordinance and other applicable regulations.

SECTION E. ABROGATION AND GREATER RESTRICTIONS

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

SECTION F. INTERPRETATION

In the interpretation and application of this ordinance all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and, (3) deemed neither to limit nor repeal any other powers granted under State statutes.

SECTION G. WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the County of Chowan or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made thereunder.

SECTION H. PENALTIES FOR VIOLATION

Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the County of Chowan from taking such other lawful action as is necessary to prevent or remedy any violation.

ARTICLE 4. ADMINISTRATION

SECTION A. DESIGNATION OF THE BUILDING INSPECTOR

The Chowan County Building Inspector is hereby appointed to administer and implement the provisions of this ordinance.

SECTION B. PERMIT PROCEDURES

Application for a Development Permit shall be made to the County Building Inspector on forms furnished by him, prior to any development activities, and may include, but not be limited to, the following plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials; drainage facilities, and the location of the foregoing. Specifically, the following information is required.

1. elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures;
2. elevation in relation to mean sea level to which any nonresidential structure will be flood-proofed;
3. provide a certificate from a registered professional engineer or architect that the nonresidential flood-proofed structure meets the flood-proofing criteria in Article 5, Section B(2);
4. description of the extent to which any watercourse will be altered or relocated as a result of proposed development;

5. provide a floor elevation or flood-proofing certification after the lowest floor is completed within 21 calendar days of establishment of the lowest flood elevation, or flood-proofing by whatever construction means, it shall be the duty of the permit holder to submit to the County Building Inspector a certification of the elevation of the lowest floor and flood-proofed elevation, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When flood-proofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work done within the 21 day calendar period and prior to submission of the certification shall be at the permit holder's risk. The County Building Inspector shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby, shall be cause to issue a stop work order for the project.

SECTION C. DUTIES AND RESPONSIBILITIES FOR THE BUILDING
INSPECTOR

Duties of the Chowan County Building Inspector shall include, but not be limited to:

1. Review all development permits to assure that the permit requirements of this ordinance have been satisfied.
2. Advise permittee that additional Federal or State permits may be required, and if specific Federal or State permits are known, require that copies of such permits be provided and maintained on file with the development permit.
3. Notify adjacent communities and the North Carolina Department of Natural Resources and Community Development prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.
4. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
5. Verify and record the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Article 4, Section B. (5).
6. Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed, in accordance with Article 4, Section B. (5).
7. When flood-proofing is utilized for a particular structure, the County Building Inspector shall obtain certification from a registered professional engineer or architect.

8. Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the County Building Inspector shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
9. When base flood elevation data has not been provided in accordance with Article 3, Section B., then the Building Inspector shall obtain, review, and reasonably utilize any base flood elevation data available from a Federal, State or other source, in order to administer the provisions of Article 5.
10. All records pertaining to the provisions of this ordinance shall be maintained in the office of the County Building Inspector and shall be open for public inspection.

SECTION D. VARIANCE PROCEDURES

1. The Chowan County Planning Board, as established by Chowan County, shall hear and decide appeals and requests for variances from the requirements of this ordinance.
2. The Planning Board shall hear and decide appeals when it is alledged there is an error in any requirement, decision, or determination made by the County Building Inspector in the enforcement or administration of this ordinance.

3. Any person aggrieved by the decision of the Planning Board, or any taxpayer may appeal such decision to the Chowan County Superior Court.
4. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places without regard to the procedures set forth in the remainder of this section.
5. In passing upon such applications, the Planning Board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and;
 - a. the danger that materials may be swept onto other lands to the injury of others;
 - b. the danger to life and property due to flooding or erosion damage;
 - c. the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d. the importance of the services provided by the proposed facility to the community;
 - e. the necessity to the facility of a waterfront location, where applicable;
 - f. the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

- g. the compatibility of the proposed use with existing and anticipated development;
 - h. the relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 - i. the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - j. the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
 - k. the costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
6. Upon consideration of the factors listed above and the purposes of this ordinance, the Planning Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.
7. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
8. Conditions for Variances:
- a. Variances shall only be issued upon a determination

that the variance is the minimum necessary, considering the flood hazard, to afford relief;

- b. Variances shall only be issued upon (i) a showing of good and sufficient cause; (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant; and, (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
- c. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- d. The County Building Inspector shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

ARTICLE 5. PROVISIONS FOR FLOOD HAZARD REDUCTION

SECTION A. GENERAL STANDARDS

In all areas of special flood hazard the following provisions are required:

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
3. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
4. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
5. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
6. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;
7. Any alteration, repair, reconstruction, or improvements to a structure which is in compliance with the provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance.

SECTION B. SPECIFIC STANDARDS

In all areas of special flood hazard where base flood elevation data has been provided, as set forth in Article 3, Section B, or Article 4, Section C (11), the following provisions are required:

1. Residential Construction - New construction or substantial improvement of any residential structure shall have the lowest floor, including basement, elevated no lower than the base flood elevation.
2. Non-Residential Construction - New construction or substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated no lower than the level of the base flood elevation or, together with attendant utility and sanitary facilities, be flood-proofed so that all areas of the structure below the required elevation is water tight and with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Article 4, Section b(3).
3. Mobile Homes
 - a. No mobile home shall be placed in a floodway except in an existing mobile home park or existing mobile home subdivision.
 - b. All mobile homes shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors.

Specific requirements shall be that:

- i. over-the-top ties be provided at each end of the mobile home, with one additional tie per side at an intermediate location on mobile homes of less than fifty feet and one additional tie per side for mobile homes of fifty feet or more;
 - ii. frame ties be provided at each corner of the home with four additional ties per side at intermediate points for mobile homes less than fifty feet long and one additional tie for mobile homes of fifty feet or longer;
 - iii. all components of the anchoring system be capable of carrying a force of 4,800 pounds; and
 - iv. any additions to the mobile home be similarly anchored.
- c. For new mobile home parks and subdivisions; for expansions to existing mobile home parks and subdivisions; for existing mobile parks and subdivisions where the repair, reconstruction or improvement of the streets, utilities and pads equal or exceed fifty percent of value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced; and, for mobile homes or placed in a mobile home park or subdivision require:
- i. stands or lots are elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be at or above the base flood level;

- ii. adequate surface drainage and access for a hauler are provided; and
 - iii. in the instance of elevation on pilings; (1) lots are large enough to permit steps; (2) piling foundations are placed in stable soil no more than ten feet apart; and (3) reinforcement is provided for pilings more than six feet above the ground level.
4. Floodways - Located within areas of special flood hazard established in Article 3, Section B, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and has erosion potential, the following provisions shall apply:
- a. Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge;
 - b. If Article 5, Section b(4)(a), is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 5.

- c. Prohibit the placement of any mobile homes, except in an existing mobile home park or existing mobile home subdivision.

SECTION C. STANDARDS FOR STREAMS WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS AND/OR FLOODWAYS

Located within the areas of special flood hazard established in Article 3, Section B, where small streams exist but where no base flood data has been provided or where no floodways have been provided, the following provisions apply:

1. No encroachments including fill material or structures shall be located within a distance of the stream bank equal to _____ times the width of the stream at the top of bank or twenty feet on each side from top of bank, whichever is greater, unless certification by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
2. New construction of substantial improvements of structures shall be elevated or flood-proofed in accordance with elevations established in accordance with Article 4, Section C.(11).

SECTION D. STANDARDS FOR SUBDIVISION PROPOSALS

1. All subdivision proposals shall be consistent with the need to minimize flood damage;

2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and
4. Base flood elevation data shall be provided for subdivision proposals and other proposed development which is greater than the lesser of fifty lots or five acres.

SECTION E. STANDARDS FOR AREAS OF SHALLOW FLOODING (NO ZONES)

Located within the areas of special flood hazard established in Article 3, Section B, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

1. All construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated, at least two (2) feet above the highest adjacent grade.
2. All new construction and substantial improvements of non-residential structures shall:
 - a. have the lowest floor, including basement, elevated to the depth number specified on the Flood Insurance Rate Map, in feet, above the highest adjacent grade.

If no depth number is specified, the lowest floor, including basement, shall be elevated at least two (2) feet above the highest adjacent grade or,

- b. together with attendant utility and sanitary facilities be completely flood-proofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

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